

REMARKS

This Amendment is in response to the Office Action dated June 9, 2003. Claims 1, 9-15 and 17-30 are pending, of which claims 1, 9 and 15 are independent and the rest is dependent. Claims 2-8 and 16 have been withdrawn as non-elected claims pursuant to an election in response to a restriction requirement. New claims 17-30 have been added.

1. Election/Restriction

The Office Action indicates that restriction is required under 35 U.S.C. §121 and 372 to one of the following inventions:

- Group I. Claims 1 and 9-15, drawn to an MRI apparatus with a correction data means classified in class 324, subclass 318;
- Group II. Claims 2-6 and 16, drawn to a MRI method comprising phase correction (gradient correction) classified in class 324, subclass 309; and
- Group III. Claims 7 and 8, drawn to an MRI apparatus with means for correcting inhomogeneities in the static magnetic field (magnet correction) classified in class 324, subclass 320.

Applicants hereby confirm the election of the invention of Group I, claims 1 and 9-15, drawn to an MRI apparatus with a correction data means.

2. Drawings

A drawing correction is proposed in a separate but concurrently filed paper. The proposed correction adds the missing reference numerals in Fig. 1, removes the legends from Figs. 1 and 6, and adds a box to illustrate power supply 409.

The proposed amendments to the specification insert therein the legends removed from Figs. 1 and 6, and add reference numerals 209 and 210. Reference numeral 17 is in the original specification, at page 17, line 15.

3. Specification (title)

A new title has been proposed.

4. Claim rejections

It is respectfully submitted that Mock U.S. Patent No. 6,259,250 does not show each limitation of the claims that would be of record upon entry of this Amendment.

As seen in Fig. 1, correction data 11 are acquired at times between times when image data 12 are acquired. Thus, control data 11(111) are acquire, then image data 12 are acquired, then control data 11(112), etc.

Amended claim 1 recites that

a step of acquiring a plurality of nuclear magnetic resonance signals as image-forming data at one excitation is performed continuously, and between image-data-acquiring steps, a step of acquiring correction data plural times at a desired interval is performed

In contrast, the Mock reference (as understood) proposes computing correction factors from image data acquired by alternately inverting the readout gradients. See Fig. 6. As understood, the Mock reference does not propose acquiring correction at times between acquisitions of image data (i.e., data for k-space that will be used to reconstruct an image for display). The Mock reference mentions that it is undesirable to acquire reference scans at each scan location. See column 2, lines 25-30.

Claim 9 states that the relevant means

acquires a plurality of correction data at a predetermined interval and acquires image-forming data continuously between acquisitions of the correction data.

It is submitted that this is different from the Mock proposal of alternately inverting the

readout train and computing correction factors from the acquired image data.

Claim 15 recites “acquiring image-forming data continuously between acquisitions of the correction data,” thus pointing out a difference from Mock.

The remaining claims are in dependent form, and it is submitted that they are not anticipated by the Mock reference at least because their parent claims are patentable, although it is believed that at least some of the dependent claims add patentable features to the parent claims.

In each of claims 1, 9, and 15, “comprises” has been changed to “comprising.” It is submitted that this change does not in any way change the meaning or scope of the claims, and not in response to a rejection or for reasons related to patentability.

The Office is hereby authorized to charge any additional fees that may be required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Entry of this amendment and allowance of this application are respectfully requested.

Respectfully submitted,



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